DOCUMENT RESUME

ED 428 441 EA 029 700

AUTHOR Reames, Ellen H.; Spencer, William A.
TITLE The Relationship between Middle School Culture and Teacher Efficacy and Commitment.
PUB DATE 1998-00-00
NOTE 40p.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Classroom Environment; *Educational Environment; *Middle School Teachers; Middle Schools; *Teacher Attitudes; *Teacher Effectiveness; *Work Attitudes
IDENTIFIERS Georgia

ABSTRACT

This paper explores the relationship between the culture of the middle school and teachers' sense of efficacy and commitment. A total of 275 middle-school teachers in Georgia, representing 40 schools divided equally among rural and urban contexts, completed a 4-part instrument designed to measure perceptions of school-work culture, organizational commitment, and teacher efficacy. School-work culture was operationalized by "The School Work Culture Profile" (Snyder, 1988) which consists of 4 subscales: organizational planning, staff development, program development, and school assessment. Teacher efficacy was measured by Gibson and Dembo's (1984) "Teacher Efficacy Scale," while teacher commitment was assessed with the "Organizational Commitment Questionnaire" (Porter, Steers, Mowday and Boulian, 1974). Using canonical correlation, the responses were analyzed to investigate the relationship between school-work culture process and structure variables on the one hand and teacher beliefs of efficacy and commitment on the other. The results reveal that all four dimensions of school-work culture were approximately equally important in explaining differences in teacher commitment and efficacy. However, these dimensions were more strongly related to the level of organizational commitment than they were to personal efficacy. General teaching efficacy was determined as not being related to the work-culture dimensions. Analysis of focus groups supported the statistical results. (Author/RJM)

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The Relationship Between Middle School Culture and Teacher Efficacy and Commitment

Ellen H Reames

Muscogee County School District

539 Brown Avenue

Columbus, GA

Office 706-649-0624

bfreames@compuserve com

William A Spencer

Professor

Auburn University

4036 Haley Center

Auburn University, AL 36849-5221

FAX 334-844-3072

Office 334-833-3073

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Abstract

The purpose of this study was to explore the relationship between the culture of the middle school and teachers' sense of efficacy and commitment. A total of 275 middle school teachers in Georgia, representing 40 schools divided equally among rural and urban contexts, completed a four part instrument designed to measure perceptions of school work culture, organizational commitment, and teacher efficacy. School work culture was operationalized by The School Work Culture Profile (Snyder, 1988) which consists of 4 subscales: organizational planning, staff development, program development, and school assessment. Teacher efficacy was measured by Gibson's and Dembo's (1984) Teacher Efficacy Scale while teacher commitment was assessed using the Organizational Commitment Questionnaire (Porter, Steers, Mowday & Boulian, 1974). Using canonical correlation, the responses were analyzed to investigate the relationship between school work culture process and structure variables on the one hand and teacher beliefs of efficacy and commitment on the other. The results revealed that all four dimensions of school work culture were approximately equally important in explaining differences in teacher commitment and efficacy. However, these dimensions were more strongly related to level of organizational commitment than they were to personal efficacy. General teaching efficacy was determined as not being related to the work culture dimensions. Analysis of focus groups supported the statistical results.

Teacher Efficacy and Commitment: Relationships to Middle School Culture

This study begins with a brief overview of the concepts inherent in school and work cultures and their relevance to the creation of middle schools in Georgia. This is followed by a summary of research related to personal and general teacher efficacy. The overview concludes with information about the concept of organizational commitment.

Middle schools as open systems

Among the many school reform efforts of the last three decades, the middle school movement is one that incorporates the concepts of an open system that seeks to create a positive work culture. At the forefront of many of the educational reform initiatives of the last two decades, it includes team teaching, team building, interdisciplinary teaching, and cooperative, collaborative decision-making (Kochan, 1992). Initiated in the 1960's, the movement gained impetus in 1989 with the report of the Carnegie Council on Adolescent Development, entitled, Turning Points: Preparing Youth for the 21st Century. (Carnegie Council on Adolescent Development, 1989). The report stated that middle schools should include eight characteristics. Among those related to open systems and positive school climate are:

1. small learning communities within the larger school building
2. success experiences for all students
3. empowerment for teachers and administrators to make decisions
4. families engaged in the education of their children
5. schools that are reconnected to their communities

The emphasis in middle school settings is on establishing a school culture in which students, teachers, and parents are involved in decision-making as members of the school community (Johnston, 1992). A central concept in the design of these schools is meeting the needs of adolescent students by creating a supportive environment for all (George, Stevenson, Thomason, & Beane, 1992).

Recognizing the value of the middle school structural and cultural arrangement, the state of Georgia took steps to create such schools throughout the state. In 1985, Georgia, through the Quality Basic Education Act (1985), and House Bill 1501, (1996) determined that middle schools (defined by the Quality Basic Education Act as grades 6, 7, and 8) were an appropriate way to respond to the needs of young adolescents. When individual school systems were asked why they chose to adopt the middle school concept they cited several reasons. Among them were: to create a better bridge between elementary and high school, to remedy deficiencies of junior high school, to try curriculum innovations, to utilize older buildings when new high schools are built, to eliminate overcrowded conditions in other schools, and to provide a program designed specifically for this age (Allen & Sheppard, 1992).

Another reason many systems chose the middle school configuration was because they were encouraged through financial incentives to convert to middle school arrangements. An additional 13% was added to the budget for all Full Time Equivalent (FTE) students in grades six through eight and awarded to school systems that chose to reorganize into middle school configurations. Matching funds were made available to school systems which built new middle schools (Georgia House Bill 1501, 1996).

By 1996, most school systems in Georgia had made the transition, but few house grades 6, 7, and 8 in separate facilities. With approximately 1,414 public school buildings housing middle graders, most of Georgia's early adolescents are still housed in buildings kindergarten through sixth grade, kindergarten through eighth grade, or grades seventh through twelfth. Of those in separate facilities, most only house grades 7 and 8, an arrangement very similar to the earlier junior high configuration (Allen & Sheppard, 1992). Approximately 11 years after the initial offer by the Georgia House of Representatives for school systems to convert to the middle school concept, 100 of the 300 middle schools have been built as designed middle schools with middle school structural configurations. The remaining 200 schools are middle schools which converted from junior high schools or were built to house elementary or high school students (Georgia Department of Education-Middle School Division personal correspondence, 1996).

Allen and Sheppard (1992) indicated another important issue facing the Georgia middle school system. Training in middle school education has been far from ideal. Of those teachers who received staff development training in middle school education, most reported it was done during the initial year of conversion, during a summer workshop or through inservice workshops of prospective faculty members with consultants on middle level school development. For example, of 284 middle schools polled, only 8 schools reported teachers were trained for a year or more by university faculty in a program specifically designed to prepare middle level teachers (Allen & Sheppard, 1992). Thus although the desire on the part of the legislatiure was to create middle schools that included the structural and cultural dimensions attributed to them in the literature, the extent to which this has been achieved has not yet be determined.

Open-systems as cultural settings

This focus on cultural context connotes a holistic, open systems interpretation of school structures and processes. Open social systems accentuate versatility, collaborative work patterns, and high levels of agreement and communication (Senge, 1990). An open system is related to and "exchanges matter with its environment, while a closed system is not related to nor does it exchange matter with its environment" (p. 116).

Viewing schools as open, social systems has been a developmental process. Educational administration and organizational theory became formal bodies of study in the 1940s and 1950s and environmental components began to be included in models because of such theorists as Parsons (1951), Getzels (1952, 1958), Getzels and Guba (1957), and Halpin (1958). The view of schools as open to their surroundings was advanced further by Barnard's (1938, 1964) balanced treatment of the internal organization and external conditions, and contingency theorists who realized that school decisions are dependent upon external factors (Lawrence & Lorch, 1967, Thompson, 1967).

Snyder and Anderson (1986) developed their model, Managing Productive Schools, and the School Work Culture Profile (SWCP), used in this study, based on the systems work of Von Bertalanffy (1972), the social systems theory of Kast and Rosenweig (1974), and Thompson's (1967) contingency theory. They viewed schools as integrated, interdependent ecological systems open to their environment. They believe that productive schools "do not operate in isolation, but rather, work as an energy system to influence total organizational productivity" (p. 12). The model and instrument were developed based on over 400 studies about successful schools and

business organizations. The School Work Culture Profile (SWCP) identifies the extent of interdependency of structures and processes in the work culture. Processes such as collaboration, participatory decision making, and supportive administrative leadership and structures including encouragement of innovation and risk-taking, school goals and planning, and staff development to further goals are measured with the four dimensions of organizational planning, staff development, program development, and assessment.

Teacher Efficacy

Little is known about teacher efficacy and teacher organizational commitment of middle school teachers. Most studies treat this group as extensions of elementary school or high school and rarely can conclusions about the relationship between organizational facets and teacher efficacy or teacher organizational commitment be stated about middle schools as distinct school organizations. Some have suggested there is a relationship between teacher expectations such as efficacy and commitment and middle school organizations. Hoffman, Sabo, Bliss, and Hoy (1994) proposed the reciprocal nature of trust and openness in middle schools. They suggest that as middle schools become more open and authentic, relationships are fostered and trust becomes strengthened. A through review of the literature revealed scant treatment of Georgia middle schools in general, and no research concerning work culture, efficacy, or commitment of teachers.

Gibson and Dembo (1984), developed a 16 item questionnaire using Bandura's psychological framework. Their Teacher Efficacy Scale bared two major factors. A principal component's analysis with orthogonal rotation was used to determine the 208 elementary teachers perceptions. The first factor was described by Gibson and Dembo (1984) as representing "a teacher's sense of

personal teaching efficacy, or belief that one has the skills and abilities to bring about student learning" (p. 573). Conceptually, this item reflected Bandura's self-efficacy concept. The second factor was interpreted as "a teachers sense of teaching efficacy, or belief that any teacher's ability to bring about change is significantly limited by factors external to the teacher" (p. 574). This "general teaching efficacy" factor was believed to represent the "general relationship between teaching and learning" and "clearly corresponds to Bandura's outcome expectancy dimension" (p. 574). A nine item personal and a seven item general teaching efficacy instrument resulted.

Gibson and Dembo (1984) found significant relationships between efficacy and the teachers' classroom behaviors. High efficacy teachers spent more time teaching students as whole classes, communicated high academic expectations to their students, and persisted longer in working with students until those students were successful. Low efficacy teachers tended to teach more in small groups rather than the whole class, communicated fewer high academic standards, did not work as long with individual students, were more critical of students, and less tolerant of student failure.

Since the initial study by Gibson and Dembo (1984) it appears that a great deal has been done concerning possible relationships between teacher efficacy and teacher attributes. Also, relationships between student achievement and teacher efficacy have strong followings in the research. At the same time there appears to be a much smaller body of research concerning the relationship of teacher efficacy and indices of productive school work culture.

Hoy and Woolfolk (1993) were interested in the relationship of teachers' sense of efficacy and school climate. The authors cited the lack of empirical work concerning this proposition. Hoy

and Woolfolk (1993) concluded that certain organizational elements were related to teachers' efficacy perceptions. The principal's ability to influence superiors for the betterment of the school and a school which emphasizes academics will have a positive influence on a teacher's sense of their own ability to help children (personal efficacy). The ability of teachers to overcome negative environmental issues which may impede student learning (general teaching efficacy) appeared to be influenced by different organizational factors i.e. morale and institutional integrity (protection from the environment outside the school).

Teacher collaboration, a critical characteristic of productive school cultures may have an effect on teacher efficacy. Rosenholtz (1989, 1992), in a path analysis involving a very large sample of elementary teachers, found collaboration to have a direct effect on teacher efficacy. Ross (1992) using the Gibson and Dembo Teacher Efficacy Scale found that teachers who interacted with peer coaches from their own schools and with expert teachers from other schools, had higher general teaching efficacy.

Collaborative decision-making processes can also influence teacher efficacy. Rosenholtz (1989, 1992) found that when mandated minimum competency testing was instituted, teacher autonomy and teacher performance efficacy was reduced because it lessened teacher-student interaction time. The mandated program also increased the tendency of some teachers to attribute student failures to forces beyond their control. In contrast, the testing program had a positive impact on perceived efficacy of a small group of teachers who had classes similar to those of the minimum competency testing developers and those who shared the curriculum conceptions of state organizers.

Grade configurations have been reported to influence teacher efficacy. Employing the Gibson and Dembo Teacher Efficacy Scale (1984) with elementary teachers, Anderson, Greene, and Loewen (1988) found third grade teachers had significantly higher teacher efficacy than sixth grade teachers. Using their own personal efficacy scale, Midgley, Feldlaufer, and Eccles (1988) found that seventh grade junior high school teachers felt significantly less personal efficaciousness than sixth-grade elementary school teachers and that .15 of the variance on the efficacy scale was accounted for by school level. In a later study, Midgley Feldlaufer and Eccles (1989) found teachers in middle and junior high schools to show significantly less personal efficacy than elementary teachers.

Others have reported similar findings of efficacy differences between elementary and junior high school teachers but have also used efficacy scales different from the Gibson and Dembo Teacher Efficacy Scale. (Lee, Buck, & Midgley, 1992). Some studies have contrasted elementary with high school teachers and found elementary teachers' perceived efficacy to be higher than the perceptions of high school teachers (Greenwood, Olejnik, & Parkay, 1990). Evidence suggesting a relationship between grade level taught and teacher efficacy seems mitigated by the use of various efficacy scales and clear definitions of middle school, junior high school and high school.

Teacher Organizational Commitment

Organizational commitment is defined as the "relative strength of an individual's identification with and involvement in a particular organization" (Steers, 1977, p. 46). It is characterized by a strong belief in and acceptance of the organization's goals and values, willingness to exert considerable effort on behalf of the organization, and a strong desire to remain with the

organization (Steers & Porter, 1979). The definition of organizational commitment, used here, is defined in terms of an attitude, (the belief in and acceptance of the organization), and behavior, (a willingness to exert effort and desire to remain in the organization). It goes further than "passive loyalty to the organization" (Mowday, Steers, & Porter, 1979, p. 224).

Reyes (1992) found organizational variables to be a significant predictor of teachers' organizational commitment. Collaborative climate, administrative support, orderly school environment, the amount of innovation encouraged, shared decision making, frequent attention to teachers by the principal explained .60 of the variability in teacher organizational commitment. Collaborative climate (beta = .33) had the largest effect. Thirty six percent of the variability in teacher commitment was uniquely explained by high level of organizational collaboration. The second most powerful predictor was organizational support.

Studies addressing type of school (elementary schools, middle schools or high schools) as a variable, report elementary teachers appear more committed than secondary teachers (Shin & Reyes, 1991). Reyes & Fuller (1995) studied the communal/bureaucratic orientations of middle schools and high schools on student achievement. Results indicated that there was not a difference between high schools and middle schools on their communal/bureaucratic orientations. Also, within school variation was larger than between school variance. Middle schools differed more within the middle school sample than middle and high schools differed.

Teacher motivation to learn, teacher efficacy, social interaction, sense of control, involvement with students, and locus of control are also associated with variability in teacher organizational commitment. Overall, these variables explained 45% of the variance in teacher commitment.

Individual attributes, (race, experience, level of education), when factored into the equation, were not significant predictors of teacher organizational commitment (Reyes, 1992)

Summary

Using an open social systems framework to develop teacher work culture involves creating collaborative, democratic environments. The middle school movement was one of the first reform efforts to recommend the development of such environments. Open environments are thought to be healthy cultural settings for students and teachers. Indeed, much of the research supports this hypothesis. However, the issue of the impact of working in these environments on teacher efficacy is as yet undetermined. In most studies, general teacher efficacy and personal efficacy did not relate in the same way or direction. Likewise there is research connecting organizational commitment with attributes of these environments such as collaboration and shared decision-making but the relationships need further study. No research could be found dealing with these issues in the middle schools of Georgia.

Method

Sample

Georgia middle schools (6-8 or 7-8) and randomly selected teachers in those schools were the population for this study. A sample of 40 middle schools, representing approximately 13% of Georgia middle schools, were randomly selected for the study. Of these 40 schools, 20 were from rural Georgia while 20 were from metropolitan statistical areas. Ten, full time, certified teachers from each school were randomly selected bringing the total number of respondents to 400. A 70% response rate was achieved.

Design and Instruments

The design of this study involved examining a set of criterion (dependent) variables by a set of predictor (independent) variables. In this case, the dependent variables were teacher efficacy, a two dimensional construct: personal efficacy and general teacher efficacy and a one dimensional construct: teacher organizational commitment. The Gibson and Dembo (1984) Teacher Efficacy Scale was used to measure the two aspects of teacher efficacy while the later was gauged using the Organizational Commitment Questionnaire (OCQ) (Porter et. al, 1974). The set of independent variables included school work culture indices of: organizational planning, developing staff, developing program, and assessing school productivity. These independent variables were measured with The School Work Culture Profile (Snyder, 1988).

Because primary interest concerned interrelationships among sets of multiple dependent and independent variables, canonical analysis was chosen. Through canonical analysis, the set of dependent variables blend to form a variate which best represents the importance of the original dependent variables. The same process occurs for the set of independent variables. The resulting pair of variates are then interpreted by the strength of their relationship (a canonical correlation), the ability of the predictor variate to explain variance in each of the criterion variables (a redundancy index), and the size i.e. magnitude of the canonical correlations.

Focus groups were conducted in two of the participating middle schools. Participants included teachers who were used as respondents of the mailed questionnaire. Questions used during the focus groups session were phrased to have teachers describe the variables used in the

study, to explore the possible relationship between all variables in question, and to provide through the use of "teacher voices," a possible consensus view of the study.

Categories were established for the criterion and predictor variables. Teacher statements were arranged under the category deemed most appropriate. Reliability was addressed by having a neutral party participate in a multiple check. Both the variable categories and the appropriateness of the teacher response codings were examined. This was done to assure the researcher's neutrality (Patton, 1990).

Results

Only one significant root was detected in the canonical analysis of teacher perceptions of commitment and efficacy with school work culture. Magnitude of the eigenvalue was .26. The canonical correlation observed was .45, and the Wilk's' Lambda was .79 ($p = .000$) (Table 1). The inspection of structure coefficients led to the observation that all four dimensions of school work culture were approximately equally important in explaining differences in teacher commitment and efficacy. However, they did appear to be more strongly related to level of organizational commitment than they were to personal efficacy. The redundancy index indicated that the predictor variate of the four school work culture dimensions explained 7.27% of the variance in the criterion variate of organizational commitment and personal teacher efficacy. General teaching efficacy did not appear to enter the criterion variate.

Comparison of Converted and Designed Middle Schools

As was reported earlier, Georgia is in a transitional phase concerning middle schools. Two-thirds of middle schools are previous junior highs or high schools. It was hypothesized that

there might be a difference in the culture of these schools (converted middle schools) as opposed to ones which had been designed as middle schools (designed middle school) and that the difference might influence teachers' perceptions of organizational commitment and teacher efficacy.

For converted middle schools, canonical analysis yielded one significant root. As reported in Table 2, the magnitude of the eigenvalue was .37. The canonical correlation was .52, and the Wilk's Lambda was .72 (p=.000). The school work culture variate was similar to the overall variate reported earlier in that all 4 subscales appeared equally important in building the predictor variate. However, the only criterion variable determined to enter in the dependent variate was organizational commitment (.959). Both personal teaching efficacy (.264) and general teaching efficacy (-.198) did not contribute. In conclusion, the canonical root for converted middle schools appeared to be a predictor of teachers' organizational commitment but not of their personal or general teaching efficacy.

When designed middle schools were subjected to the same analysis, no significant root was reported and therefore a significant relationship was not determined. Magnitude of the eigenvalue was .178. The canonical correlation obtained was .388, and the Wilks Lambda was .833 (p=.07). The independent variables of planning, staff development, assessment, and program development all appeared to be equally important as they had in the earlier analysis. Organizational commitment had the highest coefficient (.728) while the second highest structure coefficient was personal teaching efficacy (.647).

While this might have appeared to negate support of the overall canonical correlation, a closer examination of the standardized weights from the two school groups indicated converted middle schools were concerned only with organizational commitment, while designed middle school teachers were almost equally concerned with commitment and personal efficacy (Table 3). This suggested the importance of personal efficacy in the overall canonical correlation may have come from the designed middle school group.

Furthemore, canonical cross-loadings also implied the significance awarded to personal teacher efficacy in the overall canonical root may have been more attributable to the designed middle school group than the converted middle school group (Table 4). The cross-loadings for designed middle schools suggested the personal teaching efficacy variable correlated with the dimensions of school work culture while it did not in converted middle schools.

An examination of the standard deviations for the two school groups indicated that designed middle schools tended to respond in a more homogeneous manner. As presented in Table 5, the two groups appeared to deviate from the mean similarly except on organizational commitment and personal teaching efficacy. As such, designed middle schools could be characterized as having more clustered responses to their personal teaching efficacy and their commitment to the middle school.

Focus Groups: An Added Dimension

Converted and designed middle schools were similar in their responses to questions about predictor and criterion variables. Consensus in both types of schools was reached in relation to the importance of the school work culture indices. In both converted and designed schools, the

teachers preferred not to rank school work culture indices. They were seen as equally important measures in assessing their school environment. As one teacher expressed, "they go hand in hand. You can't have one without the other and have a picture of the school. They go together." As another stated, "There's no question that how we work together and the goals we set are important for everybody here."

Teachers from both converted and designed middle schools were also similar on how they ranked the importance of the criterion variables in terms of their relationship to the four school work culture indices. By far, organizational commitment was more closely related to school work culture. Personal teacher efficacy was the second most important and general teacher efficacy was ranked third. Not only was general teacher efficacy ranked third, but in both schools no serious relationship between this efficacy variable and organizational commitment or school work culture indices was noted.

Teachers saw little direct connection concerning their beliefs about the teaching profession's ability to make a difference in students' lives (general teaching efficacy) and their particular teaching abilities (personal teaching efficacy), their level of organizational commitment, or their particular school work culture practices. General teaching efficacy appeared to be more closely associated with political ideas outside their particular school i.e. the world beyond their control. It was separate, and unattached to their daily work world. Teachers spoke of the president's initiatives, the local community tax dollars and how this supports public education, and how state lottery money has improved public education. One teacher stated, "You know the

media is not our friend. It seems like they put more bad news than good news on television and in the newspaper. They hurt our group more than they help us."

Concerning personal teacher efficacy, organizational commitment, and these variables relationship to school work culture, teachers indicated school structures and processes could enhance organizational commitment and personal efficacy but not totally conclude it. "Resources help good teaching and they help your level of commitment but they don't determine it. That comes from within." As one older, veteran teacher put it, "I'm a good teacher because I have worked hard to be that. I was a good teacher when we had to supply our own paper. I'm older now, much wiser, the school gives me many more things to use, but I'm still a good teacher because I want to be." These were interpreted as indications that teachers may be experiencing a relationship between structures and processes within the work place which enhance commitment to the organization and personal efficacy. At the same time, both personal teaching efficacy and organizational commitment appeared to be internal and something within the individual's control.

The most striking difference between the focus groups occurred in the contextual language they used. In designed middle schools they tended to respond frequently and naturally using the language of the middle school concept. They spoke often of the management team, committees they served on, the need for team building, and assessment as a means of improvement. In the designed middle school, teachers took participation in school governance as a serious, professional responsibility.

Team planning was a time for sharing and coordination. As one new teacher stated, "You know I don't know what I would have done without my partners. They have really made my first

two years teaching much easier than I think it could have been. They have really been helpful." Another teacher said, "I've been here since the school opened. I helped open it. The first two years were rough but now we've really got things going. I'm so proud to be a member of this school. It makes me feel good to go out in the community and say I teach at this school. We have a great reputation. We do good things for kids. We do good things for each other. We work hard and because we work together, we make everybody a better teacher. We try hard to compliment each other."

In the converted middle school, context was quite different. Consensus was reached that on paper the school may look different but "we operate pretty much now like we did before." When questioned about team planning and integrated curriculum, converted middle school teachers said, "Oh we talk now and then, but I pretty much do in my classroom like I always have." When questioned about participation in the school governance through the management team, one converted middle school teacher said, "I've been around awhile and if you want to know the real truth, I think they've got me doing the principal's work for no more pay. You know, something like all this reorganizing in business. Do more for less."

Teachers in converted middle schools and true middle schools may appear similar in their organizational commitment and efficacy beliefs, but the context in which they operate may be quite different. In conclusion, it appeared to be important to analyze teacher perceptions of efficacy and organizational commitment not only in quantitative terms but also in the contextual teacher worlds. The focus group added an additional dimension to the study.

Discussion

On the surface, school culture was measured through the dimensions of planning, staff development, program development, and assessment of productivity. But the underlying core assumptions of school culture suggested the interrelated nature of important process and structure variables. Processes included collaboration, participatory decision making, and supportive administrative leadership. Structures included encouragement of innovation and risk-taking, school goals and planning, and staff development to further goals.

It has been suggested that organizational structure and process variables are positively related to important teacher beliefs i.e. personal efficacy and organizational commitment. Specifically, process variables such as collaborative faculty relationships, participatory decision making, and supportive administrative leadership can make a difference in how teachers' identify with school goals, the amount of effort they are willing to expend, and if they wish to continue association with the school. Those same structures and processes can also influence a teacher's perceptions of their own ability to make a difference in students' lives. These findings are consistent with much of the related literature.

Collaboration was seen as having a direct and significant effect on teacher efficacy and organizational commitment (Reyes, 1992; Rosenholtz, 1989; and Ross, 1992). When decision making is participatory for teachers, teacher commitment and efficacy are enhanced (Rosenholtz, 1989). Administrative leadership becomes an important process variable for teacher commitment.

when it is perceived as supportive, rather than controlling (Hoy, Tarter & Bliss, 1989), and for increasing teacher efficacy (Hoy & Woolfolk, 1993).

Apparently, results from this research also indicated that structures such as encouragement of innovation and "risk taking", school goals and planning, staff development and in-services, and viewing the school as a "community of learners" were important to teachers' organizational commitment and sense of personal efficacy. These results were also supported by much of the literature. Learning opportunities enhanced teacher commitment (Hoy & Ferguson, 1985, Rosenholtz, 1989). Staff development and in-service opportunities tend to increase teacher efficacy (Ross, 1994). Teachers with higher organizational commitment were inclined to stress organizational goals and the work groups necessary to achieve them (Reyes and Pounder, 1990).

General efficacy was not a significant factor in any of the canonical correlations. While it seems important for teachers to have faith in the teaching profession's ability to help children, it does not appear to enter into the equation when the school work culture structures and processes were considered. Some researchers suggest general teacher efficacy can operate independently, or jointly, with personal efficacy. Others have indicated general efficacy is an index of conservative or liberal orientation towards education (Hoy & Woolfolk, 1993; Woolfolk, Rosoff, & Hoy, 1990). Some have noted the general tendency of teachers to "answer in the middle" on this dimension (Sabo, 1994). Teachers in both types of middle schools tended to respond in a very similar, stable, middle response pattern. These, along with many focus group references, tended to support the interpretation as something conservative, or something outside the arena of teachers' individual schools. In any respect, results indicated predictors other than school work

culture processes and structures should be considered when looking for ways to improve or raise general teacher efficacy.

In general, it is suggested that something quite different may have occurred in converted and sesigned Georgia middle schools. The literature indicated teachers will conform their beliefs and behaviors according to their school workplace and will teach and reinforce to members, the correct way to perceive, and express thoughts and actions (Rosenholtz, 1989, 1992, & Schein, 1985). If this is the case, then the cultures of designed middle schools and converted middle schools might have reacted to the commitment index and the personal efficacy index in uniquely different ways and according to acceptable responses within the culture of their school.

Designed middle school teachers tended to respond in a more homogeneous manner than their counterparts in the converted middle school group on the criterion variables of organizational commitment and personal efficacy. Designed middle school culture could have given "cues" to teachers on how to properly respond to convictions in a stronger, or more appropriate manner than what was evidenced in converted middle schools. Designed middle school culture may possibly be a stronger influence on teacher beliefs. It may be that converted middle schools, as focus group discussion indicated, "are not really doing anything differently than they had in the past." These teachers may have reacted in a more isolated or individualistic manner, similar to patters in junior and senior high configurations. There is evidence to support that there are lower efficacy beliefs in high schools than in elementary schools (Greenwood, Olejnik, & Parkay, 1990).

Designed middle school teachers had higher mean scores than converted middle school teachers on all school work culture indices. At the same time, their average was lower on all three of the criterion variables. While they were not statistically significant, it seemed unique because of the possible connection to the homogeneous nature of their responses. Designed middle school teachers might be more critical of their organizational commitment and efficacy beliefs yet more attuned to practices of successful school work cultures. Results from the contextual analysis of the focus groups tended to support this.

Contextual findings revealed that in true middle schools, teachers appear to be more attuned to the language suggestive of process and structure variables. They responded in ways that were descriptive of collaborative faculty relationships, the importance of being involved in team decisions, developing goals, and viewing the school as a community of learners. They found team planning and working together to be important to each member's growth. Newer faculty members could learn, and get assistance from experienced members. At the same time, new member ideas were incorporated into team plans. Structure variables such as school goals and planning were accepted as part of their every day teacher world. They saw staff development as a means to accomplish school goals and address specific areas they felt would improve instruction, or the climate in their school.

Part of the success of important school change and improvement efforts may depend on important teacher convictions such as commitment to the organization's goals and values and their efficacy beliefs. Administrators should be cognizant of this and work towards creating collaborative cultures in which all believe in their capacity to develop an environment in which all can excel. This study points to some potential avenues to assist educational leaders and those who prepare them to achieve this goal.

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Table 1

Summary of Canonical Root for Organizational Commitment and Efficacy Convictions of Georgia Middle School Teachers

Variable	Raw Weight	Standardized Weight	Structure Coefficient	Adequacy Index	Redundancy Index
	Teacher Commitment and Efficacy				
Organizational Commitment	1 984	854	.897		
Personal Efficacy	.493	364	434		
Teaching Efficacy	-.368	- 295	- 258		
				35 312	7 279
	School Work Culture Dimensions				
Planning	1 153	.737	.963		
Program	1 006	578	958		
Staff Development	- 257	- 177	854		
Assessment	- 208	- 135	828		
				16 79	81 46

Eigenvalue= 26	Canonical Correlation= 45	Squared Cannonical Correlation= 21
Wilks' Lambda= 79	F 12, 709=5 61	Significance of F= 000

Note Results reported for the 1st canonical root The second and third roots were not significant

Table 2

Summary of Canonical Root for Organizational Commitment and Efficacy in Converted Middle Schools

Variable	Raw Weight	Standardized Weight	Structure Coefficient	Adequacy Index	Redundancy Index
	Teacher Commitment and Efficacy				
Organizational Commitment	2 044	938	959		
Personal Efficacy	278	216	264		
Teaching Efficacy	- 271	- 218	- 198		
				34 319	9 198
	School Work Culture Dimensions				
Planning	1 169	738	948		
Program	1 152	661	962		
Staff Development	- 291	- 203	847		
Assessment	- 310	- 202	807		
				21 393	79 82

Eigenvalue = 37	Canonical Correlation = 52	Squared Canonical Correlation = 27
Wilks' Lambda = 72	F 12,413 = 4 55	Significance of F = 000

Note Results reported for the 1st canonical root only The second and third roots were not significant

Table 3

Comparison of Standardized Weights for Overall Converted, and Designed Middle Schools

	Overall Middle School	Converted	Designed
Commitment	854	938	635
Personal Efficacy	364	216	529
General Efficacy	- 295	- 218	- 452

Table 4

Comparison of Canonical Cross-Loadings for Overall, Converted and Designed Middle Schools

	Planning	Staff Development	Assessment	Program
Overall Sample				
Commitment	.3945**	.3482**	.3505**	.3905**
Personal Efficacy	.1843*	.1750*	.1631*	.1977*
Converted Middle School				
Commitment	.4710*	.4130**	.4080**	.4772**
Personal Efficacy	.1342	.1373	.1218	.1336
Designed Middle School				
Commitment	.2858*	.2500*	.2607*	.2648*
Personal Efficacy	.2319*	.2028	.2096	.2558*

Note: * = 01 significance level and ** = 001 significance level.

Table 5

Means and Standard Deviations for Converted and Designed Middle Schools on Criterion and Predictor Variables

Criterion Variables	M	SD
Organizational Commitment		
Converted	4.455	.459
Designed	4.433	.387
Personal Efficacy		
Converted	2.302	.777
Designed	2.095	.663
General Efficacy		
Converted	3.187	.802
Designed	3.116	.797
Predictor Variables		
Planning		
Converted	3.625	.632
Designed	3.788	.641
Staff Development		
Converted	3.658	.699
Designed	3.833	.670
Program		
Converted	3.822	.574
Designed	4.009	.558
Assessment		
Converted	3.497	.654
Designed	3.608	.638

Table 6

Converted and Designed Middle School Focus Group Content and Context Findings

	Content of Answers Similar (Yes/No)	Context of Answers Similar (Yes/No)
1 Definition of		
Organizational Commitment	Yes	Yes
Personal Efficacy	Yes	Yes
General Efficacy	Yes	Yes
2 Ranking school culture dimensions as indicators of the school environment.	Yes	No
3 Do respondents rank organizational commitment, personal efficacy, general efficacy as indicators of how well the school functions?	Yes	No
4 Did the respondents feel predictor variables and criterion variables were related?		
Organizational Commitment	Yes	No

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	Personal Efficacy	Yes	No
	General Efficacy	Yes	Yes
5	Would working in a bad school environment effect any of these?	Yes	No
	Rank them in terms of most effected to least effected	Yes	
6	Would working in a good school environment effect any of these?	Yes	No
7	Is organizational commitment more related to		No
	Personal efficacy	Yes	
	General efficacy	Yes	
	School Environment	Yes	